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ABSTRACT

One of the most common communication technologies being used in the classroom is the videocassette recorder. The videotaping of students' performances provides the instructor with a form of visual feedback that can be used to reinforce concepts and identify the strengths and weaknesses of the students' performances. Past studies have typically viewed videotaped performances as an effective feedback tool. A survey of 84 undergraduate students enrolled in an introductory oral communications class attempted to determine if this assumption was, in fact, sound. Specifically, it posed the following questions: (1) does the use of videotape as a method of feedback enhance student appreciation of evaluation criteria used by the instructor; (2) does the use of videotape decrease the gap between students' perceptions of their grades and the actual grade they receive; and (3) what is the impact of using videotape as a method of feedback on subsequent student performance? Results showed that the answer to the first two questions was affirmative. Students in the experimental conditions did exhibit a higher level of appreciation for criteria and were more accurate at predicting their grades in relation to the instructor's assessment of their performance. However, the grades of students in the experimental groups did not significantly increase on the next presentation. Findings suggest that instructors may find it helpful to videotape the audience response to student performances. Also, it may not be necessary to discuss the videotapes with students individually. (Student survey is attached.) (TB)

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THE EFFECTS OF VIDEOTAPING ON STUDENT PERFORMANCES IN THE BASIC COMMUNICATION COURSE

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The Effects of Videotaping on Student Performances in the Basic Communication Course

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INTRODUCTION

Communication technologies are impacting how we teach course offerings in higher education. Overhead transparencies and chalkboards are being replaced with hypertext and hypermedia presentation formats. Interactive computer programs are being designed by instructors to provide students with an opportunity to learn, reinforce, and apply concepts presented in the classroom. Sophisticated distance learning systems are overcoming geographical constraints to "connect" students and forcing instructors to think about the presentation of course material in different ways. Computer data bases are being used by instructors to research a lecture topic and find current examples of concepts presented in class.

One of the most common communication technologies being used in the classroom is the videocassette recorder. An instructor can use the technology to playback videotapes to reinforce concepts or bring a subject to life. An appropriate video example can easily be obtained by recording material distributed by broadcast stations or cable services or by renting a tape. Another use of video recording technology in the classroom is the videotaping of students' performances.

The videotaping of students' performances provides the instructor with a form of visual feedback that can be used to reinforce concepts and identify the strengths and weaknesses of the students' performances. Past studies have typically viewed videotaped performances to be an effective feedback tool when combined with a personal interaction component (Diehl, Breen, & Larson, 1970; Frandsen, Larson, & Knapp, 1968; McCroskey & Lashbrook, 1970; Porter & King, 1972).

The growth of the "Video Generation," which has instant access to numerous programming sources, interactive video programming, home recording capabilities, etc., and the development and use of interactive educational computer programs may produce an environment where the tape is used as a feedback mechanism in and of itself, without human interaction as a component.

Given this change in the student population and the fact that a majority of studies which have investigated videotaped feedback were conducted approximately twenty years ago, it appeared reasonable to investigate whether the use of videotaped feedback alone (without an instructor explaining or commenting on it) would impact positively on students in a basic oral communication class. Specifically, the purposes of this study were to examine the impact of video feedback on various aspects of students' perception about performance and on actual student performance.

Based upon the available literature is seemed reasonable to

conclude that as the amount of feedback about presentations increased, student appreciation of evaluation criteria would also increase. Further, it seemed reasonable to assume that as the amount of feedback increased, student perceptions of their grades would increase in accuracy when compared to the actual grade they received. Finally, it seemed reasonable to assume that when the amount of feedback provided to students was increased, subsequent performance would be enhanced. Therefore, the following research questions were posed:

RQ1: Does the use of videotape as a method of feedback enhance students' appreciation of evaluation criteria used by the instructor?

RQ2: Does the use of videotape as a method of feedback decrease the gap between student's perceptions of their grade and the actual grade assigned by the instructor?

RQ3: What is the impact of using videotape as a method of feedback on subsequent student performance?

In order to answer these research questions, several hypotheses were posited.

RH1: Students who receive high levels of videotaped feedback will exhibit a significantly higher level of appreciation for evaluation criteria than those who do not.

NH1: There is no difference in appreciation of evaluative criteria when students exposed to different amounts of videotaped feedback about their performance are compared.

RH2: Students who receive high levels of videotaped feedback will more accurately judge their performance than students who do not.

NH2: There is no difference in accuracy of performance judgement when students exposed to different levels of videotaped feedback are compared.

RH3: Exposure to high levels of videotaped feedback on public speaking will have a positive effect on subsequent student performance.

NH3: There is no difference in subsequent performance when students exposed to various levels of videotaped feedback are compared.

METHODOLOGY

In order to test these hypotheses, an experiment was designed and carried out.

Subjects

Participants in the study were all students enrolled in an introductory oral communication course at a medium-sized midwestern university. Students were enrolled in the course in order to complete a University requirement. The course was structured so that students attended a mass lecture and then attended small laboratory sections where discussion and performances took place.

In order to control for differences in instruction and grading, students all attended the same mass lecture and were enrolled in laboratory sections taught by the same instructor. The presentations they gave were also a normal part of the class; only the videotaping procedures were added for the study.

Dependent Variables

The dependent variables in the study were student appreciation of the evaluation criteria specified by the instructor for the assignment, student performance, and student perception of grades. Student appreciation was operationalized by asking students to evaluate each of the sixteen criteria on a

5 point Likert scale as to degree of perceived importance. These criteria included items about speech construction and aspects of delivery (See Appendix A for a copy of these items.)

Student perceptions of grades were measured by asking students to specify what grade they thought they deserved on the speech. Student performance was operationalized as the grade an individual received from his/her instructor.

Independent Variables

Independent variables in this study related to the type of videotaped feedback the student received about his/her performance. Two experimental conditions were created. In low feedback condition, students watched a videotape of themselves performing (feedback only about themselves as source). In the high feedback condition, students watched a videotape of their speech and a videotape of the audience during the speech (feedback about themselves as source and the audience as receivers).

In addition to the treatment variables, students were also asked to complete several items on the questionnaire that were used to check for any potential differences between groups. These included demographic items such as age and sex, questions about high school training in speaking, and general statements about level of experience in public speaking situations. (See Appendix A for a copy of these.)

Procedures

Three groups were used in this study: Group A, Group B and

Group C. Group B and Group C were the experimental groups while Group A was the control group. Group B, the low feedback group, consisted of students who were videotaped while presenting an informative speech. These students then were asked to complete a questionnaire (See Appendix A) after watching the videotape of themselves speaking.

Group C, the second experimental group, was comprised of subjects exposed to the high feedback condition. These students were videotaped giving their informative speeches as was the audience who listened to their presentations. Subjects then watched both videos and completed the questionnaire.

Group A was the control group. These students simply gave their presentation and then completed the questionnaire.

Following the presentations, the course instructor provided copies of the grades received by the students. In addition, students were required (as a normal class assignment) to complete an additional informative speech one week later. These grades were also provided to the author. Following completion of the study, all data were computerized and analyzed using SPSS-x.

RESULTS

Demographics

A total of 84 subjects took part in this study and group size (based on intact classes) was relatively similar: n=27 in Group B, n=31 in Group C, and n=26 in the control group. Approximately eighty percent of the sample was female (n=67) and the average age of the sample was 18.39 years. The sample was

largely comprised of freshmen (n=75; 89.3%) who were primarily business majors (39.3%) or education majors (15.5%).

Responses to additional demographic items on the questionnaire revealed that a majority of the sample had completed one speech course in high school (67.9%, n=57). When asked to characterize their background in speaking, results indicated that while a variety of backgrounds was present, a vast majority of the class had done some speaking outside of class. Specifically, 22.6% (n=19) of the sample indicated they had never presented a speech outside of class, 36.9% of the sample (n=31) indicated that their public speaking experience was limited to informal remarks to audiences outside of class, 27.4% (n=23) responded that they had presented 5-10 speeches outside of class, and the remaining 13.1% (n=11) of the sample indicated that they had presented more than ten speeches outside of class. Statistical analysis which looked for differences between the three groups in demographic areas revealed no significant differences. Thus it was concluded that the groups were comparable. Based on response content it also appeared that the sample was representative of traditional college freshman.

Research Question One

The first research question posed asked about the presence of differences in student appreciation of the evaluative criteria used by the instructor when groups were exposed to different levels of videotape feedback. Sixteen evaluative criteria were used in this study and Table One summarizes the mean scores for

each as a whole and by group.

Table One
Mean Scores on Evaluative Criteria Overall and By Group

Criteria	Overall	Group A	Group B	Group C
Get Attention	4.690	4.482	4.769	4.807
Make Purpose Clear	4.631	4.444	4.808	4.645
Construct Precise Sentences	4.202	4.148	4.192	4.258
Transitions	3.857	3.741	3.846	3.968
Visual Aids	3.512	3.482	3.615	3.452
Clear Focus	4.452	4.222	4.577	4.548
Poise	4.333	4.185	4.385	4.419
Eye Contact**	4.452	4.185	4.692	4.484
Posture	4.167	3.926	4.231	4.323
Movement	3.762	3.556	3.885	3.839
Gestures	3.843	3.704	3.962	3.867
Facial Expression	4.179	4.000	4.269	4.258
Vocal Rate	4.321	4.111	4.346	4.484
Pitch**	4.274	3.963	4.346	4.484
Loudness*	4.512	4.111	4.615	4.774
Good Oral Style***	4.560	4.333	4.692	4.645

* Significant differences between groups found ($p<.01$).
** Significant differences between groups found ($p<.05$).
***Significant differences between groups found ($p<.10$).

In order to test the first null hypothesis each item which asked students to rate the importance of an evaluation criterion was compared by group using a oneway ANOVA procedure. As a

result of these analyses, three criteria were found to differ significantly: Eye Contact (Item 8), Pitch (Item 14), and Loudness (Item 15). One additional criterion, Good Oral Style (Item 16) also approached statistical significance. Table 2 reports these results.

Table 2
ANOVA Results -- Hypothesis One*

Item	df	Sum of Squares	Mean Squares	F	p
Eye Contact	2	3.4551	1.7275	3.556	.03
	81	39.3545	.4859		
	83	42.8095			
Pitch	2	4.1129	2.0564	4.3165	.02
	81	38.5895	.4764		
	83	42.7024			
Loudness	2	6.7482	3.3740	6.7919	.002
	81	40.2399	.4968		
	83	46.9881			
Good Oral Style	2	2.0671	1.0336	2.4172	.095
	81	34.6352	.4276		
	83	36.7024			

*** Note: For all items, n=84, k=3.**

An examination of the analyses reveals that three of the four items (eye contact, pitch, and loudness) were all criteria that were comprised of specific behaviors that can easily be identified on videotape. Examination of the data reveals that the group exposed to high levels of videotaped feedback (Group C) rated pitch, loudness, and good oral style significantly higher than the low feedback group (Group B) or the control group (Group A). However, Group B rated eye contact more highly than Group A or Group C. (See Table One for mean scores by group.)

It is unclear why these differences occurred, although it is interesting to note that items related to vocal behaviors were rated more highly by Group C and that a visual cue/behavior was rated more highly by Group B.

Research Question Two

The second research question asked whether the gap between student perception of their grade and the actual grade given by the instructor would decrease as the amount of feedback students were presented with increased. In order to answer this question, difference scores were calculated by taking the instructor's grade and subtracting the grade each student gave him/herself. A oneway ANOVA (difference score by group) was then calculated.

It should be noted that both student and instructor grades were quite high for the presentation. Using a scale where 11=A, 10=A-, 9=B+, 8=B, etc., the sample mean for instructor grade was 9.595 (somewhere between a B+ and an A-) with a range of 8 to 11. The sample mean for the grade students gave themselves was 9.214 with a range of 5 to 12 (C to A+). It is interesting to note that students rated themselves lower overall and that a larger range was found within student responses.

Table Three presents the results of the ANOVA calculated in order to test the second hypothesis.

Table 3
ANOVA Results -- Hypothesis Two*

df	Sum of Squares	Mean Squares	f	p
2	10.0995	5.0498	2.1791	.1197
81	187.7100	2.3174		
83	197.8095			

* Note: n=84, k=3.

As evidenced in Table Three, the findings approached statistical significance in the predicted direction. An examination of each group's difference scores reveals that in the Control Group (Group A) 25.9% of the students predicted their grade exactly, while 33.3% underestimated their score by half a grade or more and 40.7% overestimated their grade by half a grade or more. In the low feedback condition (Group B) where students only viewed videotape of themselves, results were similar: 19.2% of the students predicted their score correctly, 19.2% underestimated their grade and 61.5% of the students overestimated their score.

However, in the high feedback condition (Group C) where students viewed videotapes of themselves and of the audience listening to their presentation, students were more accurate at estimating their grade. Specifically, 45.2% predicted their score exactly, while 25.8% underestimated their grades and 29% overestimated their grades. It appears that accuracy was better in the high feedback condition where students received videotaped feedback of their receivers as compared to the other situations.

Research Question Three

Research Question Three asked if the addition of videotaped

feedback had any impact on subsequent performances in the class. It was thought that as feedback levels increased, performance would also improve. In order to test the third hypothesis, a 2 x 3 MANOVA was conducted. Results of this procedure revealed that no statistically significant difference was found when both grades were compared across the three treatment groups. Therefore, the null hypothesis was accepted.

DISCUSSION & CONCLUSIONS

The results of this study reveal that videotaped feedback does appear to have a positive impact on student perceptions but not on student performance as evaluated by the instructor. Students in the experimental conditions did exhibit a higher level of appreciation for criteria and were more accurate at predicting their grades in relation to the instructor's assessment of their performance. However, the grades of students in the experimental groups did not significantly increase on their next presentation.

Before accepting the results, several limitations to this study need to be noted. First, the grades received from the instructor in this study were quite high. It is difficult to tell if the findings from this study would remain the same if a wider range of grades were administered.

A second limitation to the study relates to the evaluation criteria used. The criteria used mainly dealt with aspects of delivery and issues in speech construction. While some of these were better appreciated by students who received videotaped

feedback, it is difficult to generalize findings to other important components of speech evaluation. For example, it is difficult to determine if students' appreciation of factors such as effective support would be enhanced through videotaped feedback.

Third, while an attempt was made to control for differences across groups, it is possible that the experimental groups possessed certain characteristics that accounted for the findings. Future studies may want to examine issues such as learning styles, personality traits, or other individual variables in order to clarify this issue.

Two implications for teachers of the basic course in oral communication do emerge from this study. First, while most instructors commonly videotape students giving a speech, few videotape the audience response. Our findings suggest that this feedback is an important cue that seems to help students alter their perceptions about performance in a positive direction.

Second, the results of this study suggest that it may not be necessary to sit down with students and discuss the videotapes. Our findings suggest, that at least in areas related to speech construction and delivery, simply having students watch the tape may increase their appreciation of evaluation criteria. Related to this is the evidence that student perceptions of their grades align more closely with the grades given by instructors if they simply watch videotapes of themselves and the audience. For instructors who teach large classes or who are unable to meet

with students outside of class for feedback sessions, our results indicate that simple exposure of students to the tapes may be a useful teaching tool for busy teachers.

Overall, we would suggest that this study be replicated taking into account some of the limitations related to grade distribution and criteria for evaluation. However, our results do indicate a break from past studies which indicated a need for discussion of videotape for feedback to be effective. As the student population continues to change and technology use in the classroom increases, we need to become aware of our options as instructors in changing our teaching techniques to improve the learning process.

APPENDIX A

NAME_____

1. GENDER M F

2. How old are your? _____

3. Select the classification category assigned to you by the registrar's office.
   _____ Freshmen
   _____ Sophomore
   _____ Junior
   _____ Senior

4. Select the area of study that you are pursuing at the University of Northern Iowa.
   _____ Business (Accounting, Finance, Management, Marketing)
   _____ Computer Science
   _____ Communication (Communication, Communicative Disorders)
   _____ Education
   _____ Fine Arts (Art, Music, Theatre)
   _____ Health & Physical Education
   _____ Humanities (English, Modern Languages Philosophy, Religion)
   _____ Natural Science (Biology, Chemistry, Earth Science, Industrial Technology, Physics)
   _____ Social & Behavioral Sciences (Geography, History, Political Science, Psychology, Social Work, Sociology & Anthropology)

5. How many speech communication courses did you complete in high school?

   _____ 0
   _____ 1
   _____ 2
   _____ 3
   _____ 4 +

6. How many drama courses did you complete in high school?

   _____ 0
   _____ 1
   _____ 2
   _____ 3
   _____ 4+

7. Were you a member of the debate team in high school?

_____ Yes _____No

8. Were you a member of the forensics team in high school?

_____ Yes _____No

9. Which of the following statements reflects your public speaking background?

_____ I have never presented a speech or address before an organization or group outside of class.
_____ I have only presented informal remarks before audiences outside of class.
_____ I have presented 5-10 speeches outside of class.
_____ I have presented more than 10 speeches outside of class.

10. How many hours of television do you watch during an average week?

_____ 1 - 5 hours
_____ 6 - 10 hours
_____ 11 - 15 hours
_____ 15 - 20 hours
_____ More than 20 hours per week
_____ I don't watch TV

11. Below is a list of criteria used to evaluate your speech. Rate each of these criteria in relation to their importance in delivering an effective speech using the following scale: 1 = very unimportant; 2 = unimportant; 3 = neither important nor unimportant; 4 = important; 5 = very important.

Get Attention	1	2	3	4	5
Make Purpose Clear	1	2	3	4	5
Construct Precise Sentences On the Subject	1	2	3	4	5
Create Sufficient Transitions	1	2	3	4	5
Use Effective Visual Aids	1	2	3	4	5
Keep Entire Speech In Focus	1	2	3	4	5
Maintain Poise	1	2	3	4	5
Maintain Adequate Eye Contact	1	2	3	4	5
Maintain Acceptable Posture	1	2	3	4	5
Use Meaningful Movement	1	2	3	4	5
Use Effective Gestures	1	2	3	4	5
Maintain Appropriate Facial Expression	1	2	3	4	5

Vocal Rate	1	2	3	4	5
Vocal Pitch	1	2	3	4	5
Vocal Loudness	1	2	3	4	5
Use Good Oral Style	1	2	3	4	5

11. In your opinion, what grade should be assigned to this speech?

_____

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